WHAT IS CLAIMED IS:

1   1.   A method of maintaining consistency between

2   header compression contexts respectively associated with

3   a packet transmitting station and a packet receiving

4   station during a packet flow from the packet transmitting

5   station to the packet receiving station, comprising:

6   determining whether a predetermined amount of

7   time has elapsed without receiving at the packet

8   receiving station a packet in the packet flow; and

9   sending a context update request from the

10   packet receiving station to the packet transmitting

11   station if the predetermined amount of time has elapsed

12   without receiving a packet at the packet receiving

13   station.

1   2.   The method of Claim 1, wherein said

2   predetermined amount of time is a time interval expected

3   between consecutive packets in the packet flow.

1   3.   The method of Claim 1, wherein said sending

2   step includes explicitly identifying the context update

3   request as having been sent in response to expiration of

4   the predetermined amount of time.

1   4.   The method of Claim 1, further comprising

2   receiving the context update request at the packet

3   transmitting station, determining whether the context

4   update request is unnecessary for context consistency,

5   and ignoring the context update request if it is

6   unnecessary for context consistency.

1   5.   The method of Claim 4, wherein said step of

2   determining whether the context update request is

3   unnecessary for context consistency includes recognizing

4   that the context update request has been sent in response

5   to expiration of said predetermined amount of time,

6   determining whether said predetermined amount of time has

7   elapsed between successive packet transmissions in the

8   packet flow, and deciding that the context update request

9   is unnecessary for context consistency if it is

10   determined that said predetermined amount of time has

11   elapsed between successive packet transmissions in the

12   packet flow.

6. The method of Claim 4, wherein said step of determining whether the context update request is unnecessary for context consistency includes determining whether a round-trip-time associated with a packet communication channel through which the packet transmitting station and the packet receiving station communicate with one another has elapsed between successive packet transmissions in the packet flow, and deciding that the context update request is not necessary if the round-trip-time has elapsed between successive packet transmissions in the packet flow.

7. A method of maintaining consistency between header compression contexts respectively associated with a packet transmitting station and a packet receiving station during a packet flow from the packet transmitting station to the packet receiving station, comprising:

sending from the packet receiving station to the packet transmitting station a context update request in response to which a context update is expected; and

if a predetermined amount of time since the context update request was sent elapses without receiving

11   the expected context update at the packet receiving

12   station, sending the context update request from the

13   packet receiving station to the packet transmitting

14   station a second time.

1   8.   The method of Claim 7, wherein the

2   predetermined amount of time is a function of an

3   estimated round-trip-time associated with a packet

4   communication channel through which the packet

5   transmitting station and the packet receiving station

6   communicate with one another.

1   9.   The method of Claim 7, further comprising

2   sending the context update request from the packet

3   receiving station to the packet transmitting station a

4   third time if, since sending the context update request

5   the second time, the predetermined amount of time elapses

6   without receiving the expected context update at the

7   packet receiving station.

1   10. The method of Claim 7, further comprising

2   receiving a context update request at the packet

3   transmitting station, determining at the packet

4   transmitting station whether a context update

5   corresponding to the received context update request has

6   already been sent from the packet transmitting station to

7   the packet receiving station, and ignoring the received

8   context update request if a corresponding context update

9   has already been sent from the packet transmitting

10   station to the packet receiving station.

11. A method of transmitting from a first packet

communication station to a second packet communication

station information including context control

information, the context control information used to

maintain consistency between header compression contexts

respectively associated with the first and second packet

7   communication stations, comprising:

8   transmitting information other than context

9   control information between the first and second packet

10   communication stations according to a first transmission

11   parameter;

12   determining that context control information is

13   to be transmitted from the first packet communication

14   station to the second packet communication station;

15   in response to the determination that context

16   control information is to be transmitted from the first

17   packet communication station to the second packet

18   communication station, providing a second transmission

19   parameter according to which the context control

20   information can be transmitted from the first packet

21   communication station to the second packet communication

22   station with a probability of delivery that exceeds a

23   probability of delivery associated with said step of

24   transmitting information other than context control

25   information according to the first transmission

26   parameter; and

27   transmitting the context control information

28   from the first packet communication station to the second

29   packet communication station according to the second

30   transmission parameter.

1   12. The method of Claim 11, wherein said second

2   transmission parameter specifies that the context control

3　information is to be transmitted from the first packet

4　communication station to the second packet communication

5　station in a plurality of consecutively transmitted

6　packets.

1　　　　13.　The method of Claim 12, wherein each of the

2　consecutively transmitted packets includes all of the

3　context control information.

1　　　　14.　The method of Claim 13, wherein the context

2　control information includes a context update request,

3　further comprising receiving the context update request

4　at the second packet communication station, determining

5　whether a context update corresponding to the received

6　context update request has already been sent from the

7　second packet communication station to the first packet

8　communication station, and ignoring the received context

9　update request if a corresponding context update has

10　already been sent from the second packet communication

11　station to the first packet communication station.

1   15.   The method of Claim 11, wherein the context

2   control information includes one of a context update and

3   a context update request.

1   16.   The method of Claim 11, wherein the second

2   transmission parameter specifies that the context control

3   information is to be transmitted from the first packet

4   communication station to the second packet communication

5   station in each of a plurality of packets respectively

6   transmitted   periodically   in   accordance   with   a

7   predetermined frequency.

1   17.   The method of Claim 16, wherein the context

2   control information includes a context update request,

3   further comprising receiving a context update request at

4   the   second   packet   communication   station,   determining

5   whether a context update corresponding to the received

6   context update request has already been sent from the

7   second packet communication station to the first packet

8   communication station, and ignoring the received context

9   update   request   if   a   corresponding   context   update   has

10   already been sent from the second packet communication

11   station to the first packet communication station.

1   18. The method of Claim 16, wherein each of the

2   periodically transmitted packets includes all of the

3   context control information.

1   19. The method of Claim 11, wherein the second

2   transmission parameter specifies that the context control

3   information is to be transmitted from the first packet

4   communication station to the second packet communication

5   station at a higher power level than a power level

6   specified by the first transmission parameter.

1   20. The method of Claim 11, wherein the second

2   transmission parameter specifies that the context control

3   information is to be transmitted from the first packet

4   communication station to the second packet communication

5   station using a lower channel coding rate than a channel

6   coding rate specified by the first transmission

7   parameter.

1   21. A method of processing header compression

2   context update requests received at a header compression

3   side of a packet communication link, comprising:

4   receiving a header compression context update

5   request at the header compression side of the packet

6   communication link;

7   determining whether the context update request

8   is unnecessary for context consistency between the header

9   compression side of the packet communication link and a

10   header decompression side of the packet communication

11   link; and

12   ignoring the received context update request if

13   it is determined to be unnecessary for context

14   consistency between the header compression side and the

15   header decompression side of the packet communication

16   link.

1   22. The method of Claim 21, wherein said

2   determining step includes recognizing that the context

3   update request was sent from the header decompression

4   side in response to expiration of a predetermined amount

5   of time between arrival at the header decompression side

6   of consecutive packets of a packet flow from the header

7   compression side to the header decompression side.

1   23. The method of Claim 22, wherein said

2   determining step includes determining whether said

3   predetermined amount of time has elapsed between

4   successive packet transmissions in the packet flow, and

5   deciding that the context update request is unnecessary

6   for context consistency if said predetermined amount of

7   time has elapsed between successive packet transmissions

8   in the packet flow.

1   24. The method of Claim 21, wherein said

2   determining step includes determining whether a round-

3   trip-time associated with the packet communication link

4   has expired between successive packet transmissions in

5   the packet flow, and deciding that the context update

6   request is unnecessary for context consistency if the

7   round-trip-time has expired between successive packet

8   transmissions in the packet flow.

1   25.   An   apparatus   for   maintaining   consistency

2   between   header   compression   contexts   respectively

3   associated   with   a   packet   transmitting   station   and   a

4   packet   receiving   station   during   a   packet   flow   from   the

5   packet   transmitting   station   to   the   packet   receiving

6   station,   comprising:

7   a timer for determining whether a predetermined

8   amount   of   time   has   elapsed   without   receiving   at   the

9   packet   receiving   station   a   packet   in   the   packet   flow;   and

10   a   context   update   request   generator   coupled   to

11   said   timer   for   sending   a   context   update   request   from   the

12   packet   receiving   station   to   the   packet   transmitting

13   station   if   the   predetermined   amount   of   time   has   elapsed

14   without   receiving   a   packet   at   the   packet   receiving

15   station.

1   26.   The   apparatus   of   Claim   25,   wherein   said

2   predetermined amount of time is a time interval expected

3   between   consecutive   packets   in   the   packet   flow.

1   27.   The   apparatus   of   Claim   25,   wherein   said   context

2   update   request   generator   is   operable   to   explicitly

3   identify a context update request that has been sent in

4   response to expiration of said predetermined amount of

5   time.

1   28. The apparatus of Claim 25, wherein said timer

2   and said context update request generator are provided in

3   the packet receiving station.

1   29. The apparatus of Claim 28, wherein the packet

2   receiving station is a radio communication station

3   operable in a telecommunications network.

1   30. An apparatus for maintaining consistency

2   between header compression contexts respectively

3   associated with a packet transmitting station and a

4   packet receiving station during a packet flow from the

5   packet transmitting station to the packet receiving

6   station, comprising:

7   a context update request generator for sending

8   from the packet receiving station to the packet

9   transmitting station a context update request in response

10   to which a context update is expected;

11   a timer coupled to said context update request

12   generator for determining whether, since a context update

13   request was sent, a predetermined amount of time has

14   elapsed without receiving the expected context update at

15   the packet receiving station; and

16   said context update request generator operable

17   for sending the context update request from the packet

18   receiving station to the packet transmitting station a

19   second time if the predetermined amount of time has

20   elapsed without receiving the expected context update at

21   the packet receiving station.

1   31. The apparatus of Claim 30, wherein the

2   predetermined amount of time is a function of an

3   estimated round-trip-time associated with a packet

4   communication channel through which the packet

5   transmitting station and the packet receiving station

6   communicate with one another.

1   32. The apparatus of Claim 30, wherein said timer

2   and said context update request generator are provided in

3   the packet receiving station.

1   33. The apparatus of Claim 32, wherein the packet

2   receiving station is a radio communication station

3   operable in a telecommunications network.

1   34. An apparatus for transmitting from a first

2   packet communication station to a second packet

3   communication station information including context

4   control information, the context control information used

5   to maintain consistency between header compression

6   contexts respectively associated with the first and

7   second packet communication stations, comprising:

8   an output for transmitting information other

9   than context control information between the first and

10   second packet communication stations according to a first

11   transmission parameter;

12   a context control information generator coupled

13   to said output for generating context control information

14   to be transmitted from the first packet communication

15   station to the second packet communication station;

16   a transmission parameter generator having an

17   input for receiving an indication that context control

18   information generated by said context control information

19   generator is to be transmitted from the first packet

20   communication station to the second packet communication

21   station, said transmission parameter generator operable

22   in response to said indication for providing a second

23   transmission parameter according to which the context

24   control information can be transmitted from the first

25   packet communication station to the second packet

26   communication station with a probability of delivery that

27   exceeds a probability of delivery associated with

28   transmission of information other than context control

29   information according to the first transmission

30   parameter; and

31   said output responsive to said second

32   transmission parameter for transmitting the context

33   control information from the first packet communication

34   station to the second packet communication station

35   according to the second transmission parameter.

1   35. The method of Claim 34, wherein said second

2   transmission parameter specifies that the context control

3   information is to be transmitted from the first packet

4   communication station to the second packet communication

5   station in a plurality of consecutively transmitted

6   packets.

1   36. The method of Claim 34, wherein the second

2   transmission parameter specifies that the context control

3   information is to be transmitted from the first packet

4   communication station to the second packet communication

5   station in each of a plurality of packets respectively

6   transmitted periodically in accordance with a

7   predetermined frequency.

1   37. The method of Claim 34, wherein the second

2   transmission parameter specifies that the context control

3   information is to be transmitted from the first packet

4   communication station to the second packet communication

5   station at a higher power level than a power level

6   specified by the first transmission parameter.

1   38. The method of Claim 34, wherein the second

2   transmission parameter specifies that the context control

3   information is to be transmitted from the first packet

4   communication station to the second packet communication

5
6
7

station using a lower channel coding rate than a channel coding rate specified by the first transmission parameter.

1
2
3
4

39.   The apparatus of Claim 34, wherein said output, said context control information generator, and said transmission parameter generator are provided in the first packet communication station.

1
2
3

40.   The apparatus of Claim 39, wherein the first packet communication station is a radio communication station operating in a telecommunications network.

1
2
3

41.   The apparatus of Claim 34, wherein the context control information includes one of a context update and a context update request.

1
2
3
4

42.   An apparatus for processing header compression context update requests received at a header compression side of a packet communication link, comprising:

an input for receiving context update requests;

5   an output for sending context updates in

6   response to receipt of context update requests at said

7   input; and

8   a context update request filter coupled between

9   said input and said output for determining whether a

10   context update request is unnecessary for context

11   consistency between the header compression side of the

12   packet communication link and a header decompression side

13   of the packet communication link and for preventing said

14   output from sending a context update in response to a

15   context update request that is determined to be

16   unnecessary for context consistency.

1   43. The apparatus of Claim 42, wherein said context

2   update request filter is operable to recognize when a

3   context update request received at said input was sent

4   from the header decompression side in response to

5   expiration of a predetermined amount of time between

6   arrival at the header decompression side of consecutive

7   packets of a packet flow from the header compression side

8   to the header decompression side.

1   44.   The apparatus of Claim 43, wherein the context

2   update request filter includes a timer for determining

3   whether said predetermined amount of time has elapsed

4   between successive packet transmissions in the packet

5   flow, said context update request filter further operable

6   for deciding that a received context update request is

7   unnecessary for context consistency if said predetermined

8   amount of time has elapsed between successive packet

9   transmissions in the packet flow.

         45.   The apparatus of Claim 42, wherein said context

     update request filter includes a timer for determining

     whether a round-trip-time associated with the packet

     communication link has expired between successive packet

     transmissions in the packet flow, said context update

6   request filter further operable for deciding that a

7   received context update request is unnecessary for

8   context consistency if the round-trip-time has expired

9   between successive packet transmissions in the packet

10   flow.

1   46.   The apparatus of Claim 42, wherein said input,

2   said output, and said context update request filter are

3   provided in a packet communication station at the header

4   compression side of the packet communication link.

1   47.   The apparatus of Claim 46, wherein the packet

2   communication station is a radio communication station

3   operable in a telecommunications network.